



Monthly Statistical Report

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Prepared by the Finance, Accounting, and Statistics Department

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JANUARY 1989

SUMMARY

In January, for the third month in a row, deliveries rose more than 6 percent, year to year. January's 1.1 million B/D increase reflected unusual strength for most products.

In addition to the boost to demand from switching to residual fuel oil in the past several months, it appears that significant volumes may have been moving into nonprimary storage as well. Following November's agreement, perceptions continued to strengthen that OPEC was having some degree of success in reducing its members' production, and this apparently has spurred some distributors and end users to purchase products beyond current needs.

Gasoline's 5.8 percent increase for the month contrasts with last year's average growth of about 1.5 percent; distillate deliveries' growth, at nearly 5 percent, was also strong, considering the extremely warm weather experienced by all but the western-most states during the month. As was the case several times last year, changes in excise tax collection procedures may have also contributed to distillate deliveries' increase.

Residual fuel oil deliveries rose 9 percent for January, while increases for 'other oils' continued in the high, 5 to 6 percent range of recent months. Kerosine jet fuel deliveries were also strong, though because of above-trend deliveries last January, they showed a year-to-year increase of only 3.3 percent.

As in December, Alaska contributed to the U.S. production decline rather than partially offsetting it as it has often done in the last several years. Alaskan production's decline accounted for 42 thousand B/D of the 283 thousand B/D drop in domestic crude oil production.

Imports in January exceeded 8 million B/D for the first time since 1980, but despite the high level of imports, total inventories fell 13 million barrels, similar to the declines for the same month of the previous two years. Product imports accounted for a third of January's 1.4 million B/D year-to-year increase, with higher residual fuel oil imports playing a prominent part in product imports' rise.

Refinery activity was high in January, with utilization at the greatest January level in ten years. The emphasis was on lighter products, and though gasoline production declined seasonally to 7.0 million B/D from December's level of nearly 7.3 million B/D, it still exceeded last January's by 4.7 percent. The high level of refinery activity was reflected in product inventories. Despite the strength in deliveries of both products, gasoline stocks rose 14 million barrels, not out of line with recent experience for the month, while distillate stocks' 9 million barrel decline was below average.

PRODUCT SUPPLIED ^{1/}

Gasoline

GAIN IN USAGE LIKELY LESS THAN FOR DELIVERIES.

January's gasoline deliveries jumped nearly 6 percent, contrasting with last year's annual average growth of about one fourth that size. Though the increase was unusually large, there is little reason to believe that actual consumption increased by this amount. Over the past two years, monthly data for gasoline deliveries have shown year-to-year changes of from roughly -1 to +5 percent, even though underlying consumption trends are estimated to have run in the much narrower range of from 1.5 to 2.5 percent.

Changes in actual consumption can fluctuate because of everything from severe winter weather to holiday effects, but even so, data on vehicle travel vary substantially less than do those for gasoline deliveries. Thus, some of the fluctuations in gasoline deliveries appear to stem not from variations in consumption but from changes in nonprimary inventories, which are not measured by either API or the Department of Energy.

January's gasoline deliveries jumped nearly 6 percent, contrasting with last year's annual average growth of about one

Because of the developments of the past several months, it is likely that this provides a substantial part of the explanation for January's unusually large increase in deliveries.

Premium unleaded is now estimated to account for about 24 percent of gasoline sales. Although its market share has nearly doubled in the past five years, the market for unleaded gasoline of all types has grown markedly as well, as older, leaded-fuel

API ESTIMATES

	JANUARY	
	Million B/D	Percent Change
Total domestic deliveries	18.3	6.3
Crude oil production ^{2/}	7.9	(3.4)
Total imports ^{3/}	8.2	20.6
Stocks (million bbl) ^{3/}	1,030	(2.3)

vehicles have been retired from the fleet and lead phasedown regulations have led to replacement of leaded regular with midgrade unleaded in many markets. As a percent of unleaded gasoline sales, premium's share has grown less rapidly, rising from about 24 percent in early 1984 to about 28 percent at the end of 1987. Since that time, its share has apparently remained near 28 percent.

Distillates

WARM WEATHER NOT REFLECTED IN DELIVERIES.

With this January the warmest in more than 30 years, reduced heating oil consumption would normally be expected to have translated into reduced distillate deliveries. However, despite weather more than 20 percent warmer than last year's colder-than-normal January, distillate deliveries rose 4.7 percent for the month. The warmer weather would have normally reduced the year-to-year increase in deliveries by an estimated 300 thousand B/D, so that January's increase suggests that, just with other products, not all of the month's deliveries reflected end-use consumption.

One additional factor that may have kept deliveries firm in January was the change in tax collection procedures for off-highway users who, until January 1, had to pay federal excise tax up front and then apply for a refund. The shift returned these users' purchases to the tax-free status that had applied before the previous rule change last April 1. The most recent change may have encouraged the shifting of some purchases forward to January to avoid tying up funds in excise tax payments that would otherwise not be required for purchases made after the first of the year. The change last April 1 also had an apparent effect on purchasing patterns, with deliveries in the month before rising nearly 14 percent and deliveries the following month falling 4 percent, year to year.

While transportation and other diesel fuel uses continue to account for distillates' underlying growth, the heating oil sec-

tor has been relatively stable. Except for deviations due to weather, demand in the residential and commercial markets, the main heating oil sectors, has remained in the mid-700 thousand B/D range for most of the 1980s.

In the Northeast, which accounts for more than half of U.S. heating oil consumption, oil's share of new construction has been edging upwards in the last several years while price-related conversions to other fuels have diminished from the levels of the early 1980s. Even so, the gradual erosion of its market share has continued, with oil heat's one-fourth share of new construction still far short of its more than 40 percent share of the existing housing stock.

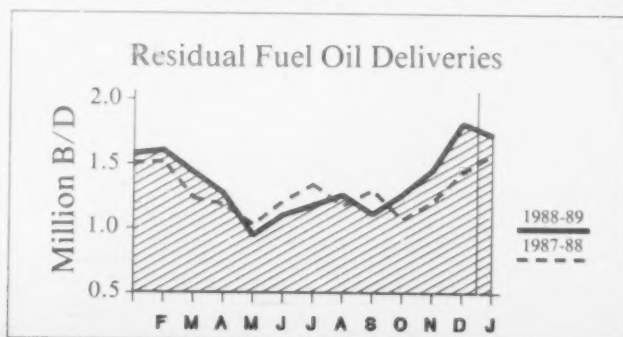
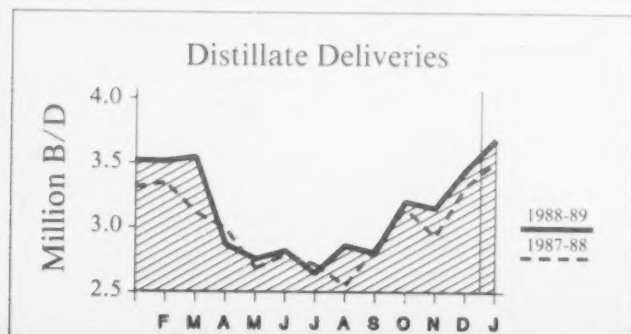
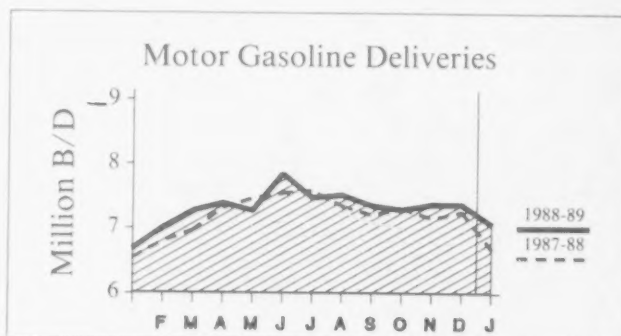
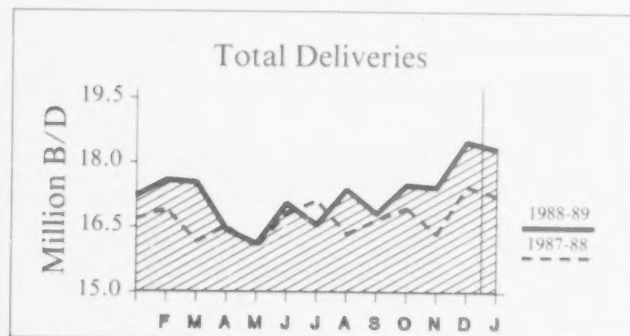
Residual Fuel Oil

INDUSTRIAL, BUNKER SECTORS CONTRIBUTE TO INCREASE.

Deliveries of residual fuel oil in January are estimated to be 1,724 thousand B/D, representing a decline of 5.0 percent from December but an increase of 9.3 percent from January 1988. The substantial month-to-month decrease, which runs counter to the normal seasonal pattern, reflects short-term, weather-related factors affecting deliveries to the electric utility sector; the substantial year-to-year increase, however, represents on-going strength in both the industrial and bunker fuel markets, consistent with observed trends over the last several months.

Deliveries to electric utilities during the month are believed to have been weak as a result of the unusually mild weather. Despite this weakness, actual consumption is reported to have declined even more precipitously, resulting in a continuing increase in secondary and tertiary stocks held by utilities. Although the stock increase apparently represents a continuing pattern of accumulation seen during the past several months, it is also believed that the ample supply of fuel in storage has contributed to the current softness in deliveries to this sector.

Deliveries to the industrial sector, however, are believed to



have remained strong. Residual fuel's recent price increase has lagged behind that of crude oil during the recent recovery in oil prices, enabling heavy fuel continue to compete with gas and maintain its share of the industrial market. Bunker fuel markets are also reported to be fairly active in most regions, contributing to the year-to-year growth. The most active trading is reported to have occurred on the East Coast, but other areas are also reported to have maintained recent high levels of activity.

Kerosine Jet Fuel

GROWTH MASKED BY STRONG DELIVERIES A YEAR AGO.

At first, it might seem that kerosine jet fuel's 3.3 percent rise in deliveries over last January broke step with the larger-than-usual increase for most other products; the increase was even less than last year's average growth of about 5 percent. But if account is made for deliveries a year ago that were roughly 100 thousand B/D above trend, this year's increase would be calculated at more than 10 percent.

Underlying consumption growth for the month is probably better represented by trends in air traffic. Although growth in air traffic slowed during much of 1988, more recent data suggest a slight recovery towards the end of the year. Increases in miles flown by the third quarter had slipped to about 3 percent from 8 percent for all of the previous year, but fourth quarter growth appears to have been in the 4 to 5 percent range.

Both domestic and international passenger travel contributed to the uptick. However, domestic growth in miles flown is estimated to have been only 2 to 3 percent compared with international travel growth on the order of 15 percent.

Other Oils

DELIVERIES RISE 6 PERCENT.

Deliveries of other oils for January 1989 are estimated to be 4,475 thousand B/D, representing an increase of 0.8 percent from December 1988 and 6.0 percent from January 1988. Most of the products comprising the other oils category are believed to have contributed to its continued growth. The month-to-month increase, however, is somewhat less than the seasonal norm as a result of the milder-than-average weather for the month, which is believed to have reduced deliveries of propane and kerosine to heating customers.

Petrochemical feedstocks were reported to have sustained high rates of deliveries, continuing the robust trend of the previous year. Record high utilization rates at petrochemical plants, which were reported to have operated with virtually no downtime during the month, are believed to account for much of the sizeable year-to-year increase in other oils deliveries. At the light end, ethane apparently continues to maintain its dominance, resulting in a slight erosion of propane's market share, but demand for ethane appears to be softening as a result of the high level of ethylene stocks that have accumulated during the last several months. Growth in midgrade gasoline demand, however, is believed to have absorbed increased amounts of isobutane as an additive, reducing the availability of that product as a petrochemical feedstock. Naphtha is believed to have maintained its share of the market for heavier feedstocks.

Despite the mild weather, asphalt and road oil deliveries are

not believed to have been substantially higher than seasonal norms. Refinery gas production, on the other hand, is estimated to have registered substantial increases.

SUPPLY 1/

Production

ALASKAN OUTPUT CONTRIBUTES TO YEAR-TO-YEAR DROP.

As in December, Alaska contributed to January's year-to-year decline in crude oil production, rather than partially offsetting it as it usually has during the past several years. Production in Alaska declined 42 thousand B/D from one year earlier, with the fall-off in lower 48 production bringing the decline for the U.S. as a whole to 283 thousand B/D.

Although the year-to-year declines in Alaskan production are not necessarily evidence of a downward trend, production there has stabilized during the past year, with no major new fields or development projects having come on stream during that period. In the previous four years, gains from Alaskan production had added from 40 to 100 thousand B/D to U.S. production levels each year.

Within the lower 48, all regions have shared in the production decline of the past three years, but to varying degrees. In the East and Midwest, which are relatively mature areas with small volumes produced per well, production has declined by more than 20 percent between 1985 and 1988.

In the Gulf Coast area, crude oil output has fallen by 15 percent, with offshore declines roughly proportional to those onshore. Because of the relative size of production in this region, its drop accounted for three fifths of the more than 1 million B/D decline for the combined lower 48 over the period. Production declines of about 12 percent in the Rocky Mountain states and about 9 percent on the West Coast where smaller, but still substantial.

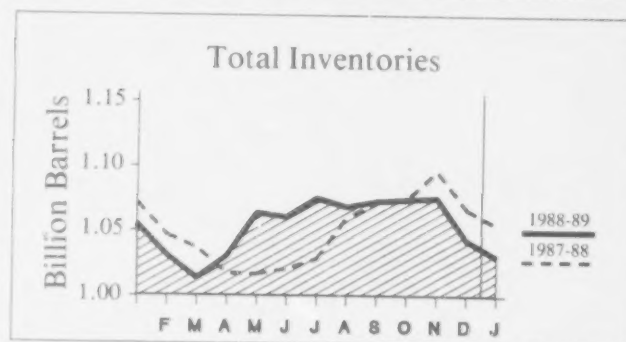
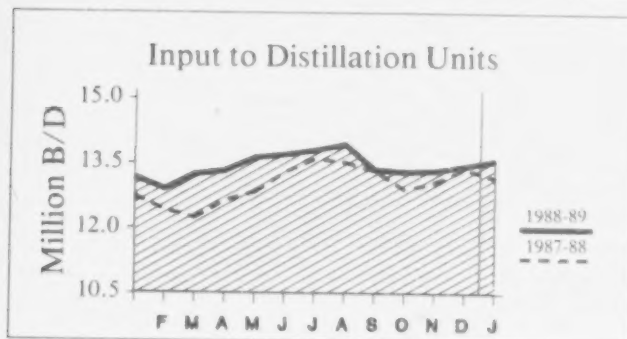
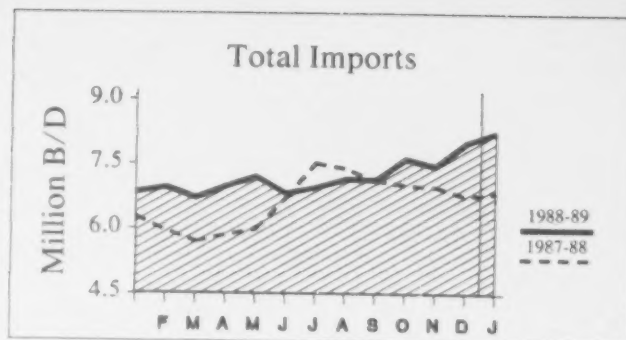
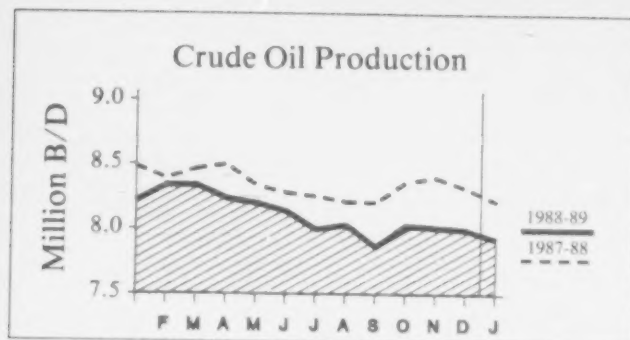
Imports

IMPORTS SURPASS 8 MILLION B/D.

Imports in January exceeded 8 million B/D for the first time since the beginning of the decade. With imports surging ahead by 1 million B/D or more from the levels of only four or five months ago, it might seem that, even with the continuing decline in domestic production and rise in demand, at least part of the increment in imports would end up in inventories. But, at least at the primary level, this was not the case in January because of the month's unusually strong deliveries.

Crude oil imports continued to rise, increasing almost 1 million B/D over last January's below-trend level. The strength in product imports of the last several months also continued in January, with year-to-year increases over the past three months averaging nearly 500 thousand B/D. More than half of this increase has been in the form of residual fuel oil, the surge in demand for this product over the last several months being supplied largely from imports as refineries have concentrated on producing lighter products.

For January alone, a third of the 1.4 million B/D year-to-year increase in total imports was accounted for by products. Of the nearly 450 thousand B/D increase in product imports, about 250 thousand B/D consisted of residual fuel oil, which rose by a third to 956 thousand B/D. Imports of other pro-



ducts were also strong, with imports of gasoline and components rising 93 thousand B/D to 450 thousand B/D and distillate increasing 19 thousand B/D to 374 thousand B/D.

Western hemisphere countries account for a substantial portion of U.S. supplies of foreign gasoline and components, which are imported mainly into the East Coast. Of the 450 thousand B/D imported into the U.S. last year, approximately 175 thousand B/D came from South America and the Caribbean—principally Brazil, Venezuela, and the Virgin Islands, with an additional 50 thousand B/D coming from Canada. European sources accounted for most of the remainder, including about 50 thousand B/D from Rumania.

Refinery Operations

LIGHT PRODUCTS EMPHASIZED.

Increases in refinery utilization continued in January, with input to crude oil distillation units rising 3.1 percent over last January. Utilization, averaging 85.4 percent of operable capacity, was the highest for the month since 1979.

With the concentration on lighter products, gasoline production averaged more than 7.0 million B/D. Though down seasonally from December's nearly 7.3 million B/D level, this still amounted to a 4.7 percent increase over the previous January and, as with refinery input, the highest January figure in ten years. Distillate fuel oil production was also high compared with the same month in recent years, rising 2.1 percent from a year ago. But though deliveries of residual fuel oil have risen substantially in recent months, domestic production of residual fuel oil has not; year-to-year changes in the output of

this product continue to be mostly negative, with January's decline of 4.8 percent being no exception.

Inventories

DESPITE HIGH IMPORTS, STOCKS FALL.

Even though imports set another recent-year record in January, stocks fell 13 million barrels, similar to declines for the same month in the previous two years; month-end stocks were 25 million barrels lower than one year earlier. Imports of crude oil continued to be strong, but the high level of refinery activity actually drew down crude oil stocks slightly.

Despite the strength in gasoline deliveries for January, the high level of refinery operations and emphasis on lighter products increased inventories by 14 million barrels, a seasonal rise not out of line with recent historical experience. At month-end, gasoline stocks were slightly higher than those of last January.

Distillate stocks fell 9 million barrels, a below-average decline for January. The smaller decrease can not be attributed to the unusually warm weather, however, since deliveries were still quite strong; as with gasoline, the smaller decline reflects the strength in refinery activity.

Distillate inventories' decrease put month-end stocks at 118 million barrels. Although this season's primary stocks have been lower than typical for this time of year than in the recent past, evidence indicates that stocks outside the primary system have been higher than usual. Draws on primary inventory have accounted about 3 percent of distillate supplies over October to January, a figure not atypical for the four-month period.

- 1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.
- 2/ Includes lease condensate.
- 3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 562 million barrels as of January 31, 1989).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	JANUARY			YEAR-TO-DATE		
	1989 ¹	1988 ²	% Change	1989 ^{3/4}	1988 ²	% Change
Products Supplied:						
Total motor gasoline	7,064	6,679	5.8			
Finished leaded motor gasoline*	1,095	1,286	(14.9)			
Finished unleaded motor gasoline*	5,969	5,393	10.7			
Naphtha-jet	187	173	8.1			
Kerosine-jet	1,405	1,360	3.3			
Distillate fuel oil	3,683	3,517	4.7			
Residual fuel oil	1,724	1,578	9.3			
All other oils ⁴	4,475	4,220	6.0			
Reclassified ⁵	- 232	- 303	(23.4)			
Total domestic products supplied	18,306	17,224	6.3			
Exports	729	891	(18.2)			
Total products supplied	19,035	18,115	5.1			
Supply:						
Domestic production:						
Crude oil ⁶	7,928	8,211	(3.4)			
Natural gas liquids	1,589	1,569	1.3			
Other supply ⁷	863	1,104	(21.8)			
Total domestic supply	10,380	10,884	(4.6)			
Imports:						
Crude oil, total	5,516 ^{10/}	4,552 ^{10/}	21.2			
Canadian	601	635	(5.4)			
Other	4,915	3,917	25.5			
Products, total	2,725	2,281	19.5			
Residual fuel oil	956	737	29.7			
Other	1,769	1,544	14.6			
Total imports	8,241	6,833	20.6			
Total supply	18,621	17,717	5.1			
Stock change, all oils	- 414	- 398	XXXX			
Refinery Operations						
Input to crude oil distillation units	13,577	13,172	3.1			
Operable capacity	15,907	15,911	-			
Refinery utilization (%) ⁸	85.4%	82.8%	3.1			
Crude oil runs	13,452	12,975	3.7			
Stocks (millions bbls.)	1989	1988	1988 ²	% Change from ...		
	Jan. 31 ⁹	Dec. 31 ⁹	Jan. 31	Previous Month	Year Ago	
Crude oil ^{10/}	330.7	332.9	345.5	(0.7)	(4.3)	
Unfinished oils	99.9	98.8	95.3	1.1	4.8	
Total motor gasoline**	242.7	228.7	239.5	6.1	1.3	
Finished leaded motor gasoline*	40.2	40.4	54.3	(0.5)	(26.0)	
Finished unleaded motor gasoline*	160.3	149.1	145.8	7.5	9.9	
Naphtha-jet	6.5	6.3	8.4	3.2	(22.6)	
Kerosine-jet	37.7	37.5	37.9	0.5	(0.5)	
Distillate fuel oil	118.1	126.8	127.2	(6.9)	(7.2)	
Residual fuel oil	45.4	44.5	46.6	2.0	(2.6)	
All other oils	149.3	167.6	154.2	(10.9)	(3.2)	
Total all oils	1,030.3	1,043.1	1,054.6	(1.2)	(2.3)	

1/ Based on API estimated data converted to a monthly basis.

2/ Source: U.S. Department of Energy.

3/ Source:

4/ Includes crude losses.

5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.

6/ Includes lease condensate.

7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.

8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."

9/ Derived by interpolating API weekly stocks data.

10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.

R/ Revised.

* Included in motor gasoline.

** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

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